

REMARKS

Applicant appreciates the Examiner's thorough consideration provided the present application. Claims 21, 23-29, 31, 33-36 and 38-40 are now present in the application. Claims 21, 24, 27, 31 and 35 have been amended. Claim 30 has been cancelled. Claims 21, 24, 27, 31 and 35 are independent. Reconsideration of this application, as amended, is respectfully requested.

Claim Rejections Under 35 U.S.C. §112

Claim 30 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Without conceding to the propriety of the Examiner's rejection, but merely to timely advance the prosecution of the application, as the Examiner will note, claim 30 has been cancelled. Accordingly, Applicant respectfully submits that this rejection has been obviated and/or rendered moot. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, are therefore respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 21, 23, 31 and 35-38 stand rejected under 35 U.S.C. § 102(b) as unpatentable over Takashi, JP 2001-0274096, and Kaneyama, U.S. Patent No. 6,452,214. Claims 24-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takashi in view of Koike, U.S. Patent No. 7,141,444. Claims 29, 30, 33, 34 and 40 stand rejected under 35 U.S.C. § 103(a) as

being unpatentable over Takashi in view of Koike, and further in view of Koide, U.S. Patent Application Publication No. US 2001/0048112. Claim 39 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Takashi and Kaneyama, and further in view of Yuasa, U.S. Patent No. 6,017,774. These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

In light of the foregoing amendments to the claims, Applicant respectfully submits that this rejection has been obviated and/or rendered moot. Without conceding to the propriety of the Examiner's rejection, but merely to timely advance the prosecution of the application, as the Examiner will note, independent claims 21, 24, 27, 31 and 35 have been amended.

Independent claims 21 and 24 have been amended to recite a combination of elements including "an n type GaN based layer on the first GaN based layer, wherein the n type GaN based layer is a current leakage prevention layer."

Independent claim 27 and 31 have been amended to recite a combination of elements including "a second n type GaN based layer on the first n type GaN based layer, wherein the second n type GaN based layer is a current leakage prevention layer."

Independent claim 35 has been amended to recite a combination of steps including "forming an n type GaN based layer on the first GaN based layer, wherein the n type GaN based layer is a current leakage prevention layer."

Support for the amendments to claims 21, 24, 27, 31 and 35 can be found on page 8, lines 27-35 and page 9, lines 1-4 of the specification as originally filed. Applicant respectfully

submits that the above combinations of elements and steps set forth in claims 21, 24, 27, 31 and 35 are not disclosed or suggested by the references relied on by the Examiner.

As disclosed on page 8, lines 27-35 and page 9, lines 1-4 of the specification, the n-GaN layer 308 functions as a current leakage prevention layer to effectively cut off the current leakage which is, at the time of reverse bias, reversely intruded in the light emitting layer (multi-quantum well active layer).

The Examiner seemed to refer to Takashi's layer 10 as the n type GaN layer of the present invention. However, Takashi simply discloses that the layer 10 is an n-guide layer. Takashi nowhere discloses that the n-guide layer 10 is a current leakage prevention layer as recited in claims 21, 24, 27, 31 and 35. Therefore, Takashi fails to teach "an n type GaN based layer on the first GaN based layer, wherein the n type GaN based layer is a current leakage prevention layer" as recited in claim 21 and 24, "a second n type GaN based layer on the first n type GaN based layer, wherein the second n type GaN based layer is a current leakage prevention layer" in claim 27 and 31 and "forming an n type GaN based layer on the first GaN based layer, wherein the n type GaN based layer is a current leakage prevention layer" as recited in claim 35.

In addition, although the Koike '112 Publication in FIG. 3 and paragraph [0048] discloses n-GaN layers (3a, 3b), Koide simply discloses that the GaN layer 3a is silicon doped and the GaN layer 3b is an n-clad layer, but fails to teach that the GaN layers (3a, 3b) function as a current leakage prevention layer. Therefore, the Koike '112 Publication also fails to teach "an n type GaN based layer on the first GaN based layer, wherein the n type GaN based layer is a current leakage prevention layer" as recited in claim 21 and 24, "a second n type GaN based

layer on the first n type GaN based layer, wherein the second n type GaN based layer is a current leakage prevention layer” in claim 27 and 31 and “forming an n type GaN based layer on the first GaN based layer, wherein the n type GaN based layer is a current leakage prevention layer” as recited in claim 35.

With regard to the Examiner’s reliance on the other secondary references, these references also fail to disclose the above combinations of elements and steps as set forth in independent claims 21, 24, 27, 31 and 35. Accordingly, these references fail to cure the deficiencies of Takashi.

In addition, claims 23, 25, 26, 28, 29, 33, 34, 36 and 38-40 depend, either directly or indirectly, from independent claims 21, 24, 27, 31 and 35, and are therefore allowable based on their respective dependence from independent claims 21, 24, 27, 31 and 35, which are believed to be allowable.

In view of the above remarks, Applicant respectfully submits that claims 21, 23-29, 31, 33-36 and 38-40 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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